

Workshop on
“Climate Change & Ecosystem Impacts
in Southwest Forests and Woodlands”

Sedona Hilton
Feb. 7-9, 2005.

*What does everyone need to know about climate variability & change
and its impact on forests and woodlands in the Southwest?*

Purpose: To make state-of-the-art climate and ecology research information relevant to on-the-ground application for decision makers, land managers and extension educators.

Monday Day 1:

9:00-11:30am: Registration/Check-in
11:30-12:00pm: Hand out sack lunch/board buses
12 – 5:00pm: Fieldtrip
6:00 – 8:30pm: Poster Session (Evening hors d’oeuvres/cash bar)

Tuesday Day 2:

7:00 – 8:00 Registration/Check-in
8:00 – 8:10 Welcome – Chris Jones/Tom DeGomez (Moderators)
8:10 – 9:05 **Climate Change in the Southwest: Past, Present and Future**
– **Dr. Jonathan Overpeck**, Director,
Institute for the Study of Plant Earth (ISPE),
and Professor of Geosciences, University of
Arizona

– An overview of our understanding of climate processes affecting the Southwestern ecosystems, inferred by paleorecords, historic events, instrumental records and oceanic oscillations.

9:05 – 10:00 **Climate-induced Ecological Disturbances**
– **Dr. Thomas Swetnam**, Director,
Laboratory of Tree-Ring Research, and Professor
of Dendrochronology, University of Arizona

– A synopsis at ecosystem disturbance events, inferred by dendrochronology, anthropological case study and historical events, including insect outbreaks, wildfire and other ecological response.

10:00 – 10:30am **Break**
10:30 – 11:30 **Projected Ecological Response to Climate Change**
– **Dr. Ron Neilson**, BioClimatologist,
USDA Forest Service, Pacific NW Research
Station, Team Leader, Mapped Atmosphere-Plant-
Soil System, and Professor, Depts. of Botany and
Plant Pathology, Forest Science, Oregon State
University

– A look at climate and vegetation change modeling, crucial factors and variables, and which ecological responses are probable and projected for forests and woodlands in the arid Southwest.

Wednesday Day 3:

8:00 – 9:30am

Ecological Response Talks – Kathy Jacobs (Moderator)

– 20 minutes overviews of key ecological response factors in relation to present and projected climate change and disturbance variables

- **Spatial scales:** **Dr. John Kupfer**, Assoc. Professor of Geography, Department of Geography and Regional Development, University of Arizona
- **Recruitment/ dispersal/ survivorship:** **Dr. Julio Betancourt**, Project Chief, National Research Program, Water Resources Division, U.S. Geological Survey and Adjunct Assoc. Professor, Depts. of Geoscience and Geography, Desert Laboratory, University of Arizona
- **CO2 Fertilization:** **Dr. Bruce Kimball**, Research Leader, Environmental and Plant Dynamics Research Group, U.S. Water Conservation Laboratory, USDA, Agricultural Research Service
- **Invasive Plants:** **Dr. Kathryn Thomas**, Vegetation Biologist, USGS Southwest Biological Science Center, Colorado Plateau Field Station, Northern Arizona University

9:30 – 9:45am

Break – Go to Breakout rooms

9:45- 10:45am

Breakouts

– One-hour session to discuss each ecological response and associated factors, summarize and describe ecological response, and probable equilibrium point or trend over time, *up to fifty years* (led by previous speaker and assisted by committee person).

- **Spatial scales, linear vs. non-linear:**

Dr. John Kupfer

(Andrew Comrie, Breakout Moderator)

- **Recruitment, dispersal, survivorship:**

Dr. Julio Betancourt

(Mike Crimmins, Breakout Moderator)

- **CO2 Fertilization:**

Dr. Bruce Kimball

(Melanie Lenart, Breakout Moderator)

- **Invasive Plants:**

Dr. Kathryn Thomas

(Alix Rogstad, Breakout Moderator)

10:45 – 11:00am

Break

